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|--|-------------|----------------------|---------------------|------------------|
| 10/811,421   | 03/26/2004  | Fusao Ishiguchi      | 04536.034001        | 2620             |
| 22511 7590 10/18/2010  |             |                      |                     |                  |
| OSHA LIANG L.L.P.<br>TWO HOUSTON CENTER<br>909 FANNIN, SUITE 3500<br>HOUSTON, TX 77010 |             |                      |                     |                  |
| EXAMINER   |             |                      |                     |                  |
| HAILU, TESHOME   |             |                      |                     |                  |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
| 2434   |             |                      |                     |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@oshaliang.com  
buta@oshaliang.com

### Office Action Summary

**Application No.**

10/811,421

**Applicant(s)**

ISHIGUCHI, FUSAO

**Examiner**

TESHOME HAILU

**Art Unit**

2434

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 1, 2010 has been entered.
2. Claims 1-8 are pending.
3. Claims 9-11 have been added.

***Response to Amendment***

4. Applicant's arguments filed on December 15, 2009, with respect to 35 USC 103(a) rejections of claims 1-8 have been fully considered but they are not persuasive.
5. Applicant argues that the art on record, Doiron (US 5,481,610) in view of Nakano (US Pub. No. 2003/0182565), fails to teach the newly added claim limitation, "the rewritable flash memory is attached to the digital video disc device in a detachable manner". Also applicant argues to the previous Examiner respond to this limitation by saying that it would not have been obvious to modify an element traditionally embedded in hardware for security reasons into a removable element. Examiner agrees to the applicant idea. However, the claim language does not clearly claim the advantage of being detachable for security reason or any other reason. The claim language mentioned only that it is detachable. Therefore, examiner asserts that the art on record teaches the claim limitation of claims 1, 5 and 8 as discussed in the previous office action.

***Claim Objections***

6. Claim 9 and 10 are objected to because of the following informalities: the short form CPRM and CPPM should be written as "Content Protection for Recordable Media" and "Content Protection for Prerecordable Media" respectively. Appropriate correction is required.

***Claim Rejections- 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim limitation, "... CPRM and CPPM" is not clear. Examiner understands that CPRM is Content Protection for Recordable Media and CPPM is Content Protection for Prerecordable Media from the back ground part of the specification. Also examiner understands that both are different media (i.e. device). However, it is not clear that the two different kinds of media use the same storage device. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doiron et al (US 5,481,610) in view of Nakano (US Pub. No. 2003/0182565) and further in view of Sibert (US 7,058,805).

As per claim 1 Doiron discloses:

A digital video disc device, comprising: a rewritable flash memory including program information and an area of prescribed size in which key data associated with information on a digital video disc is recorded in advance in a prescribed address in an unused specific area of the area of prescribed size; (abstract, line 1-6, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM). Also see fig. 2.

Random data is written in all of the unused area around an area where the key data is recorded in the specific area of the flash memory, (column 4, line 18-37, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM. As a result, the stored key itself looks like the stored random data and it would be hard for an attacker to identify the cryptographic keys from the random data). Also see the table in fig.3

Means for accessing the information on the digital video disc using the key data read from the prescribed address in the flash memory; (column 1, line 5-13, the invention relates to radio frequency (RF) communications systems, and more particularly to digital radios having a "secure" mode that encrypts and decrypts messages. Still more particularly, the present invention relates to techniques for securely loading and storing cryptographic key information within a mobile or portable radio transceiver).

Doiron does not explicitly disclose, the information on a digital video disk. However, in the same field of endeavor, Nakano teaches this limitation as, (page , paragraph 7, the DVD right protection system each DVD reproduction terminal for reproducing digital content recorded on a distributed DVD pre-stores a master key. The master key is determined by the manufacturer of the particular reproduction terminal. The reproduction terminal, which uses this master key in the decryption process, has a function of ultimately decrypting and reproducing the digital content recorded on the DVD).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Doiron and include the information on a digital video disk

using the teaching of Nakano in order to substitute one method for the other to achieve the predictable result of securing information in electronic media using the key data stored in memory.

The key data is configured to be modified by a key data writing equipment. (Column 10, line 60-65, as cryptographic keys are loaded into the bank 86, the bit-mask byte 90 is updated to indicate which keys within the bank are valid).

Doiron does not explicitly disclose that the key data can be modified by key data writing equipment. However, in the same field of endeavor, Nakano teach this limitation as, (page, paragraph 113, the key setting system 104 has a key information storage unit 301, a key information generation unit 302, an invalid terminal designation unit 303, a key information updating unit 304, a decryption key determining unit 305, and an encryption key designation unit 306). Both the key information generation unit (writing equipment) and key information updating unit (modifying) are a part of key setting system (see fig. 3 of Nakano).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Doiron and include the limitation, "the key data can be modified by key data writing equipment", using the teaching of Nakano in order to make the key information valid by updating (modifying) with right and most up-to-date information (see paragraph 117 of Nakano).

The rewritable flash memory is attached to the digital video disc device in a detachable manner. (Abstract, line 1-6, a digital radio has standardized "key" storage for several different cryptosystems (DES, VGE, VGS, etc.). Cryptographic keys are stored in a table in non-volatile memory such as EEPROM).

Doiron and Nakano does not explicitly disclose about a rewritable flash memory including program information. However, in the same field of endeavor, Sibert teach this limitation as, (column 5, line 52-64, as shown in FIG. 4A, encoding system 28 preferably includes: a processing unit 50; system memory 52—preferably including both high speed random access memory (RAM) and non-volatile memory, such as read only memory (ROM), erasable or alterable non-volatile memory (e.g., flash memory), and/or a hard disk for storing system control program, data, cryptographic keys encryption

routines, and corresponding decryption/validation routines designed to process data in accordance with the principles of the present invention).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Doiron and Nakano to include a rewritable flash memory which include a program information using the teaching of Sibert in order to properly control the system using the stored control program (see column 6, line 35-40, of Sibert).

Claims 5, 8 and 9-11 are rejected under the same reason set forth in rejection of claim 1:

As per claim 2 Doiron in view of Nakano and further in view of Sibert discloses:

The digital video disc device according to claim 1, wherein the key data is an encryption key for equipment for encrypting and recording the information on the digital video disc. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

As per claims 3 in view of Nakano and further in view of Sibert discloses:

The digital video disc device according to claim 2, wherein the key data is a decryption key for equipment for decrypting the information read from the digital video disc. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

Claim 4 is rejected under the same reason set forth in rejection of claim 3:

As per claim 6 Doiron in view of Nakano and further in view of Sibert discloses:

The method of recording prescribed information according to claim 5, wherein the memory is mounted on equipment for a digital video disc, (see the EEPROM on fig. 2).

The prescribed information is key data associated with information on a digital video disc. (Column 9, line 33-52, "meaningful" data stored within table 78 includes a first byte random value 82, a kth byte random value 84, and at least one (and typically many) cryptographic keys stored in key banks residing within a cryptographic key block 86).

As per claim 7 Doiron in view of Nakano and further in view of Sibert discloses:

The method of recording prescribed information according to claim 5, wherein the prescribed information is a password. (Column 8, line 1-33, the EEPROM 76 that stores a key table 78 containing cryptographic keys to be used for encrypting and decrypting purpose by encryptor/decryptor 74).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TESHOME HAILU whose telephone number is (571)270-3159. The examiner can normally be reached on Mon-Fri 7:30a.m. to 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Teshome Hailu/



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Examiner, Art Unit 2434

/Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2434